University of Washington Superfund Research Program

"Effects-Related Biomarkers of Environmental Neurotoxic Exposures"

Program Director:	**Harvey Checkoway**
Associate Director:	**Evan Gallagher**
Program Manager:	**Jay Chen**
Program Coordinator:	**Mary Saucier**

Habitat restoration, sponsored and undertaken by a number of agencies, is underway at seven sites along the Duwamish. Near the City of Seattle's Herring's House Park on West Marginal Way, a salt marsh is being restored. Only about 2 percent of the original estuary remains.

History of the Superfund Research Program (SRP)*

- 1986: Superfund Amendments and Reauthorization Act (SARA)
- Objectives:
  - Development of methods to detect hazardous substances in the environment
  - Evaluation of adverse effects on human health and the environment
  - Development of methods to reduce amount and toxicity of hazardous substances

*Overall Superfund program includes research (SRP) and worker training

UW SRP Grant History

- 1986 - First award, 4 projects (Program Director, S. Murphy)
- 1986 - Supplement awarded, 10 projects (S. Murphy)
- 1990 - D. Eaton becomes Program Director
- 1992 - Competing renewal awarded (D. Eaton)
- 1995 - Competing renewal awarded (D. Eaton)
- 1998 - H. Checkoway becomes Program Director
- 1999 - Competing renewal awarded (H. Checkoway)
- 2003 – Competing renewal awarded (H.Checkoway)
- 2008 – Competing renewal awarded (H. Checkoway)

Current Grant Structure (2009-2014)

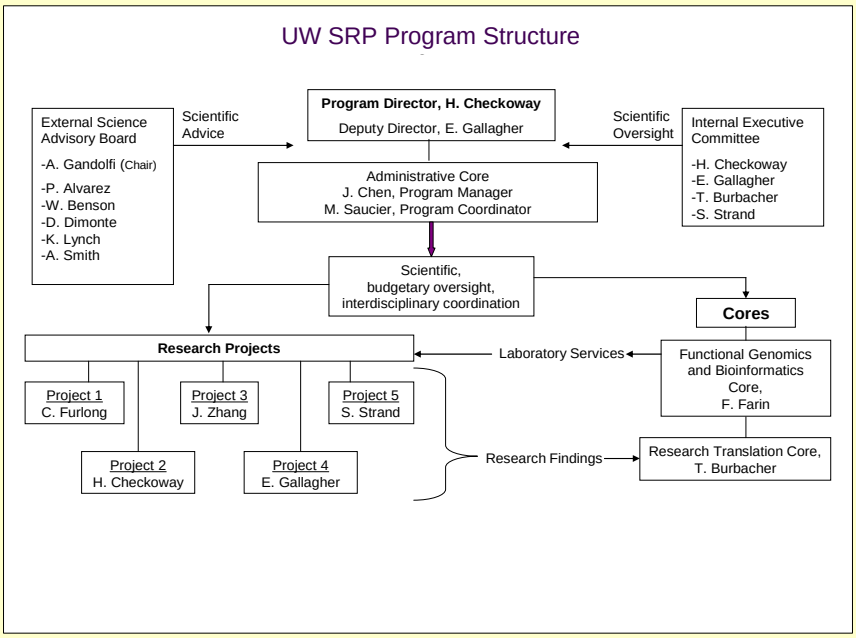
- 5 Research Projects
  - 3 Biomedical
  - 2 Engineering/remediation
- 4 Cores
  - Administrative
  - Functional Genomics/Bioinformatics
  - Research translation/outreach

Research Projects

1. Paraoxonases: Biomarkers of susceptibility to environmentally-induced diseases (C. Furlong, Genome Sciences)*
2. Metal exposures and parkinsonism among welders (H. Checkoway, DEOHS)*
3. Plasma protein biomarkers for parkinsonism in welders (J. Zhang, Pathology)*
4. Gene-environment interactions in salmon neurotoxicity (E. Gallagher, DEOHS)**
5. Phytoremediation of pollutants using transgenic plants (S. Strand, Forest Resources)**

*Biomedical; **"Non-biomedical"

UW SRP Program Structure



Program Specific Aims

1. **Develop and test biomarkers of neurotoxicant exposure, effect, and susceptibility in accessible tissues in humans, animals, plants**
2. **Apply biomarker methodology in phytoremediation and assessment of fish neurotoxicity**
3. **Translate our research findings to community, government, private sectors stakeholders**